References:
BirdLife International. 2000. *Threatened birds of the world*. Lynx Edicions and BirdLife International, Barcelona and Cambridge, UK.
Blake, E. R. 1977. *Manual of Neotropical birds*. Vol. 1. Univ. Chicago Press, Chicago.
Collar, N. J., Crosby, M. J. & Stattersfield, A. J. 1994. *Birds to watch 2: the world list of threatened birds*. BirdLife International (Conservation Series 4), Cambridge, UK.
Fjeldså, J. & Krabbe, N. 1990. *Birds of the high Andes*. Zoological Museum University of Copenhagen and Apollo Books, Copenhagen and Svendborg.
Stattersfield, A. J., Crosby, M. J., Long, A. J. & Wege, D. C. 1998. *Endemic bird areas of the world: priorities for biodiversity conservation*. BirdLife International (Conservation Series 7), Cambridge, UK.

Address: Coleção Ornitológica, Departamento de Zoologia, ICB, Universidade Federal de Minas Gerais, C.P. 486, 31270-901, Belo Horizonte, MG, Brazil, e-mail: bacurau@mono.icb.ufmg.br. *Current address:* Departamento de Biologia Geral, Universidade Estadual de Montes Claros, Av. Rui Braga, s/nº, 39401-089, Montes Claros, MG, Brazil.

Relationship of the Red-thighed Sparrowhawk *Accipiter erythropus* and the African Little Sparrowhawk *A. minullus*

by Michel Louette

Received 13 July 2001

The taxonomy of the two smallest and parapatric African *Accipiters* is in dispute; some authors consider them as belonging to a single species (Wattel 1973, Snow 1978), others as separate species (Brown *et al.* 1982, del Hoyo *et al.* 1994). In the forest-dwelling Red-thighed Sparrowhawk *Accipiter erythropus*, two subspecies are recognised by Brown *et al.* (1982): the smaller nominate race in forested Upper Guinea, the larger *A. e. zenkeri* in forested Lower Guinea. In the African Little Sparrowhawk *A. minullus*, living in woodland from Ethiopia to the Cape, several races were described but none is nowadays recognised. In measurements, these two sparrowhawks are very similar, although *A. e. zenkeri* is *c.* 5% larger in wing-length than *A. minullus* (Wattel 1973, Prigogine 1980, Kemp & Crowe 1994, Kemp & Kemp 1998), which in turn is therefore about the same size as *A. e. erythropus* (Brown *et al.* 1982). They share an unique pattern of a white rump and broken white upper tail-bars. They differ in adult plumage colour: the Red-thighed Sparrowhawk is darker above than the African Little Sparrowhawk, is indistinctly barred or unbarred ventrally and has unbarred rufous flank and thigh feathers, whereas the African Little Sparrowhawk is distinctly barred ventrally with paler flanks. The eye is reddish in the Red-thighed Sparrowhawk and normally yellow in the African Little Sparrowhawk (Allan 1997, but see Liversidge 1962 for occasional red eye colour).

Other authors, including Dowsett & Dowsett –Lemaire (1993) advocated that, before deciding on their specific status, more evidence was required. I present here four points, based on (old) material in collections.

Specimen information

1) Prigogine (1980) studied the specimens present in the Royal Museum for Central Africa (RMCA). He claimed that the taxa 'ne sont pas en contact dans l'est du Zaïre' (suggesting that they are, elsewhere) and produced a map with localities in Zaïre (now Democratic Republic of Congo - DRC) and adjoining countries. The map contains one dot for *A. minullus* in western DRC, also present in Snow's (1978) atlas. This locality is Gungu (according to the 'Gazetteer and Maps of African bird localities', prepared by B.P. Hall for the atlas publications) at 05°44'S, 19°19'E. The presence of *A. minullus* at Gungu was indeed mentioned by Schouteden (1965). This, unfortunately, is in error: in fact H. Wille collected two specimens of Shikra *A. badius* (RMCA 101059 and 111290, already correctly identified in 1964) there. It is surprising that A. Prigogine, who had ample access to the RMCA collection, did not look up these specimens. Two more localities for *A. erythropus* from DRC became known after the publication of Prigogine's map: Ngongo at 04°24'S, 17°42'E and Kibu at 03°21'S, 28°33'E. I confirm that there are no specimens of *A. minullus* from western DRC, which seems to be occupied completely by *A. erythropus*, apparently occurring also in the well-wooded regions outside evergreen forest.

2) *A. erythropus* is traditionally mentioned from a single locality in Angola: 'Quibula, interior of Benguella' of Barboza du Bocage (1892a, 1892b), said to be by Rosa Pinto (1983) 'near Massano de Amorim, Huambo province'. It is indicated on Snow's and Prigogine's maps. This isolated far southern occurrence was repeated in Traylor (1960, 1963), Rosa Pinto (1983) and Dean (2000). The specimen (female according to Barboza du Bocage 1892a, Traylor 1960 and Rosa Pinto but male according to Barboza du Bocage 1892b) was collected by Anchieta and said to have been sent to the Museum in Lisbon. It is no longer available (the Lisbon collection was destroyed by fire in 1978), but it is uncertain if it was ever deposited there (some Barboza du Bocage specimens were donated to other museums). Traylor and Rosa Pinto were unable to examine it. Barboza du Bocage's identification of this singleton (as *A. hartlaubi*, a synonym of *A. erythropus*) was made in comparison with a plate in Sharpe (Pl. V, published in 1876, according to Traylor 1960, but in fact Pl. VI, published in 1874) where an adult Red-thighed Sparrowhawk is depicted. Traylor (1960) says 'that the picture is perfectly clear' (with which I agree) and 'it would not be possible to confuse with a specimen of *minullus*' (which I doubt). In his 1892a paper, Barboza du Bocage gives the colour of the unfeathered parts, as noted by Anchieta: 'iris colour of red minium, cere and eye rim pale yellow, legs virgin wax colour' (my translation). This combination of colours does not correspond well with an adult Red-thighed Sparrowhawk (which has orange cere and legs). I have

serious doubts that *A. erythropus* was really involved, or that it is present in this part of Angola. Whereas *A. minullus* is widespread in Angola (Dean 2000), the sympatry of the two taxa in this country is unproven.

3) The RMCA has three specimens of *A. minullus* taken in Baraka at 04°06'S, 29°06'E, Kivu, on Lake Tanganyika, DRC by Cdt Pauwels, in or before 1910. In the register the eye colour for all three is given as 'red'. Careful re-examination of the two adult males and the one adult female reveals the following:

Male RMCA 1500 was compared with 10 adult male *A. minullus* from Kenya, Rwanda and southern DRC and 25 adult male *A. e. zenkeri* from DRC. It is decidedly an intermediate. Diagnosis: dorsal colour darker than *A. minullus*, not quite so dark as *A. erythropus*. Ear coverts grey, not black as in *A. erythropus*. Ventral side within the variation for *A. erythropus*, not *A. minullus*: weak barring, uniform red flank feathers; thighs to the contrary barred grey on white as in *A. minullus*, not rufous or rufous and unbarred grey as in *A. erythropus*.

Male RMCA 1499 is somewhat stained on ear-coverts and breast. I consider it to resemble *A. minullus*, but it has deep rusty flanks, compared to the other adult *A. minullus* males in RMCA. It could be an intermediate with mostly *A. minullus* characteristics.

Female RMCA 1498 was compared with nine adult female *A. minullus* from Kenya, Ethiopia, Rwanda and DRC and with nine adult female *A. erythropus* from DRC, and seems to fall within the normal variation for *A. minullus*.

Two adult male birds from southern Rwanda also deserve mentioning (RMCA 69605 from Mayaga at 02°15'S, 29°35'E and RMCA 88559 from rivière Akanyaru at *c.* 2°24'-48'S, 29°35'S–30°00'E). Their dorsal side and head is very dark, darker than all other *A. minullus* available in the RMCA collection; ventrally they match *A. minullus*.

Wing lengths of the males cited above (in mm): 1500: 147; 1499: 147; 69605 in moult; 88559: 145.These measurements are within the range for both taxa, as given in Prigogine (1980): *A. e. zenkeri* 145-157 mm; *A. minullus*: 137-147 mm (including the birds singled out here).

It is conceivable that some hybridisation takes place in the DRC- Rwanda border region, which is a potential contact zone between the taxa (*contra* Prigogine 1980).

4) Differences in juvenile plumage are raised as an important point by those authors advocating specific separation of the two taxa. Differences do exist but there is also variation within each taxon (Chapin 1932, Kemp & Kemp 1998). I examined 14 *A. minullus* specimens from Burundi, Kenya, Rwanda and DRC (including AMNH 262190, collected by Chapin (1932) at Kisenyi at 01°42'S, 29°15'E, not on Prigogine's map), two *A. e. erythropus* from Togo and six *A. e. zenkeri* from DRC. Stresemann (1926) described two juvenile birds from Beni at 0°28'N, 29°28'E as *A. minullus sassii*. I have seen pictures of both, they seem to be typical *A. e. zenkeri*. In general, *A. erythropus* is darker dorsally than *A. minullus*; ventrally: *A. erythropus* is saturated

with rusty on the thighs and on the flanks, which are also heavily barred. The two *A. erythropus* races differ apparently in that the central part of the belly is sparsely marked in *A. e. zenkeri*, which is weakly streaked or spotted, but in the nominate race, the ventral side is heavily barred rufous. The ventral side of *A. minullus* is variable, but in most specimens heavily streaked or spotted, including the central parts of the belly and breast. In fact, the differences between *A. erythropus* and *A. minullus* are those one would expect between such differently coloured birds as adults. Indeed, immature plumage heralds the adult plumage (Louette 2000, 2001 for the African Goshawk *A. tachiro*) and this may explain the difference in dorsal hue. Differences in spotting on the ventral side in the juvenile are also present among the similarly distributed African Goshawk, which represents a similar but more complex case, demonstrating plumage variation according to habitat in this genus (Louette 2000, 2001).

Conclusion

The provisional distribution in the west of the potential contact zone, the occasional hybridisation in the east and the variation in the juvenile plumage lead me to consider the Red-thighed Sparrowhawk and the African Little Sparrowhawk as typical allospecies in a superspecies (Amadon & Short 1992). They may even prove to belong to a single biological species in the classical sense (see above for morphometry, suggesting a similar ecology and identical complex upper tail pattern). They are likely to have evolved for some time in separate regions and possess a plumage hue according to the general habitat there (forest and woodland). In more recent times, their distribution ranges approached, with localised (occasional or regular?) hybridisation (even by 1910, before massive deforestation). The range of the African Little Sparrowhawk is peculiar: it is nowadays still absent from west Africa, which is surprising, because the habitat seems adequate; its region of origin must have been to the south or east of that of the Red-thighed Sparrowhawk.

Acknowledgements

I would like to thank I. Carreira, C. Hazevoet and R. Prys-Jones, who commented upon the destination of bird skins in the Barboza du Bocage collection. C. Blake sent a specimen on loan from the American Museum of Natural History (AMNH), New York and A. Gamauf and S. Frahnert sent pictures of type material held in the Naturhistorisches Museum, Vienna and the Museum fuer Naturkunde, Berlin.

W. Tavernier translated parts of the Portuguese texts. M. Herremans, A. Reygel and P. Herroelen were helpful with literature and specimen examination.

References:

Allan, D.G. 1997. Field identification of African *Accipiter* species and similar-looking hawks. *Bull. Afr. Bird Cl.* 4: 74-82.

Amadon, D. & Short, L.L. 1992. Taxonomy of lower categories – suggested guidelines. *Bull. Brit. Orn. Cl. Suppl.* 112A: 11-38.

Barboza du Bocage, J.V. 1892a. Aves do sertao de Benguella. *Jornal de Sciencias, Mathematicas, Physicas e Naturaes*. 2 (II): 157-172.

Barboza du Bocage, J.V. 1892b. Additions et corrections à l'Ornithologie d'Angola. *Jornal de Sciencias, Mathematicas, Physicas e Naturaes.* 2 (VIII): 248-264.

Brown, L.H., Urban, E. K. & Newman, K. 1982. *The birds of Africa.* Volume 1. Academic Press, London.
Chapin, J.P. 1932. The birds of the Belgian Congo. Part 1. *Bull. Am. Mus. Nat. Hist.* 65: 1-756.
Dean, W.R.J. 2000. *The birds of Angola. An annotated checklist.* Checklist N° 18. British Ornithologists's Union, Tring.
del Hoyo, J., Elliott, A. & Sargatal, J. 1994. *Handbook of birds of the world.* Vol 2. Lynx Edicions, Barcelona.
Dowsett, R.J. & Dowsett-Lemaire, F. 1993. Comments on the taxonomy of some Afrotropical bird species. pp 323-389. *In*: Dowsett, R.J. & Dowsett-Lemaire, F. *A contribution to the taxonomy of Afrotropical and Malagasy birds.* Tauraco Research Report N° 5. Tauraco Press, Liège.
Kemp, A. & Crowe, T. 1994. A morphometric analysis of *Accipiter* species. *In*: Meyburg, B.U. & Chancellor, R.D. *Raptor conservation today.* pp 651-665. Pica press, East Sussex.
Kemp, A. & Kemp, M. 1998. *Birds of prey of Africa and its islands.* New Holland, London.
Liversidge, R. 1962. The breeding biology of the Little Sparrowhawk *Accipiter minullus. Ibis* 104: 399-406.
Louette, M. 2000. Evolutionary exposition from plumage pattern in African Accipiter. *Ostrich* 71: 45-50.
Louette, M. 2001. Redesciption of African Goshawks *Accipiter tachiro* on Bioko island and the adjacent mainland. *Ostrich* 72: 24-27.
Prigogine, A. 1980. Étude de quelques contacts secondaires au Zaïre oriental. *Gerfaut* 70: 305-384.
da Rosa Pinto, A.A. 1983. *Ornitologia de Angola.* 1° Volume (Non Passeres). Instituto de Investigaçao Cientifica Tropical, Lisboa.
Schouteden, H. 1965. La faune ornithologique de la province du Kwango. *Doc. Zool. (Musée Royal de l'Afrique Centrale, Tervuren, Belgique)* 8: 1-60.
Sharpe, R.B. 1874. *Catalogue of birds in the British Museum.* Volume I. Trustees of the British Museum (Natural History), London.
Snow, D.W. 1978. *An atlas of speciation in African non-passerine birds.* Trustees of the British Museum (Natural History), London.
Stresemann, E. 1924. *Accipiter minullus sassii* subsp. n.. *Orn. Mber.* 32: 109.
Traylor, M.A. 1960. *Notes on the birds of Angola, non-passeres.* pp. 131-186. *In*: Estudios Diversos (XIX). Publ. Culturais. N° 51. Companhia de diamantes de Angola, Lisboa.
Traylor, M.A. 1963. *Check-list of Angolan birds.* Publ. Culturais. N° 61. Companhia de diamantes de Angola, Lisboa.
Wattel, J. 1973. Geographical differentiation in the genus *Accipiter. Publ. Nuttall Orn. Club.* 13: 1-231.

Address: Dr Michel Louette, Royal Museum for Central Africa, B 3080 Tervuren, Belgium. louette@africamuseum.be

Hippolais warblers apparently breeding on the north Somalia coast

by J.S.Ash & D.J.Pearson

Received 17 July 2001

In May 1979 JSA and J.E.Miskell found two intriguing species of warblers in trees near the north-west Somalia coast. One was an *Acrocephalus* with a wing formula like that of the African Reed Warbler *A. baeticatus*, the other a small *Hippolais*. In